

ABSTRACT**THE EFFECT OF CURCUMIN ON
COGNITIVE FUNCTION OF ISCHEMIC STROKE MICE**

ROMANI

Ischemic stroke is major neurological disorder and leading cause of death and disability worldwide. Ischemic stroke caused by thrombus or plaque which afford lacked blood flow to the brain, that results necrosis and apoptosis of neuron cell. Areas of the brain e.g amygdala, cortex, hippocampus and striatum also suffer damage. Hippocampus plays a role in cognitive functions, damage in this area caused cognitive impairments. Some evidence reported that reactive oxygen species (ROS) presents a role factor in the occurrence and development of ischemic stroke condition. Curcumin has been proven decrease neural damage but the mechanism are poorly understood. Curcumin had been reported as an antioxidants which could against reactive oxygen species (ROS) in ischemic stroke condition. The purpose of this study to observe the effect of administer curcumin (i.p) on cognitive function in mice that induce ischemic stroke. Mice were randomly divided into eight group: sham + vehicle, sham + curcumin 50 mg/kgBB, sham + curcumin 100 mg/kgBB, sham + curcumin 300 mg/kgBB, stroke + vehicle, stroke + curcumin 50 mg/kgBB, stroke + curcumin 100 mg/kgBB dan stroke + curcumin 300 mg/kgBB. Ischemic stroke was performed by unilateral common carotid artery occlusion (CCAO) method. Mice underwent sham surgery or CCAO for 2 hours. Curcumin (50,100 and 300 mg/kgBB) or vehicle was administered intraperitoneally starting 30 minutes after occlusion and were continued for 6 days. Mice were assessed for cognitive function use Y-maze with cues. Administration curcumin in stroke group significantly increase cognitive function showed by increase value of % correct choice started in third day.

Keyword: CCAO, Curcumin, Cognitive function